2011 Atlantic tropical storm season forecast

26 May 2011 - Our forecast for this year's North Atlantic tropical storm season states it is likely to be quieter than the very active season in 2010.

Our forecast for the 2011 season is for 13 tropical storms between June and November, with a 70% chance that the number will be in the range 10 to 17, which is very close to the 1980-2010 long-term average of 12. This is in contrast to 2010 which had a total of 19 tropical storms.

The most likely Accumulated Cyclone Energy (ACE) index - a measure of the storm lifetimes and intensities as well as total numbers over a season - is 151, with a 70% chance that the index will be in the range 89 to 212: well above the 1980-2010 average of 104.

For the past four years, the Met Office forecast has given accurate guidance of Atlantic tropical cyclone activity, identifying the relatively quiet seasons of 2007 and 2009 from the active seasons of 2008 and 2010.

Matt Huddleston, Principal Consultant on climate change at the Met Office said: "North Atlantic tropical storms affect all of us through fluctuating oil, food and insurance markets. Seasonal and multi-year forecasts are the focus for key research at the Met Office and the benefits of that are being realised through the increasing accuracy of its predictions".

This is the second year of operation of the Met Office's new seasonal prediction system called GloSea4. The new generation model has better representation of the complex physical processes that cause tropical storms and hurricanes to form, thus improving the accuracy of the forecast. The forecast also uses information from the seasonal prediction system of the European Centre for Medium Range Weather Forecasts.

One of the key indicators for a tropical storm season is the El Niño Southern Oscillation (ENSO), which affects sea surface temperatures in the tropical Pacific and, remotely, conditions in the North Atlantic. It's therefore vital to be able to accurately predict the ENSO cycle and GloSea4 has shown good skill in such predictions.

Our Climate Services for Reinsurance provides expert advice on tropical storms.
You can get updates on current tropical storms via @metofficestorms .

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